

to the signal light.

A marked-up version of the Abstract is included in the attached "Version With Markings to Show Changes Made."

B. IN THE SPECIFICATION:

Please AMEND the paragraph beginning on page 9, second full paragraph extending over to page 10, as follows:

B2
Particularly in this preferred embodiment, the nonlinear medium 16 is provided by a third-order nonlinear medium. Without a signal input, a continuous wave at wavelength of λ_c is lased from the optical loop 8. When the signal light is introduced into the nonlinear medium 16, the lasing wave (CW) is amplitude-modulated (AM) or frequency-modulated (FM) in the nonlinear medium 16, and then mode-locked to the frequency of f_s . As a result, clock pulses (optical clock) having a wavelength λ_c and a frequency f_s are generated or regenerated, and the clock pulses are output through the optical coupler 10 from the output port 4. This will now be described more specifically.

Please AMEND page 21, second full paragraph extending over to page 22, as follows:

B3
In the system shown in FIG. 5, the waveform of the signal light is distorted by dispersion and nonlinear effects in the optical fiber transmission line 30, or waveform degradation occurs because of the accumulation of ASE noise in the optical amplifiers during repeated transmission. with the configuration of each optical repeater 32 shown in FIG. 6, the 3R functions can be obtained according to the present invention. Accordingly, by repeating these functions, long-haul transmission can be effected.

A marked-up version of the Specification is included in the Attachment.

C. IN THE CLAIMS:

Please CANCEL claims 4 and 5.

Please AMEND claims 1, 8, 14, 15 and 17 as follows (for the Examiner's convenience, all pending claims are reproduced below):

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c.1
B4
1. (ONCE AMENDED) An optical device comprising:
an optical path provided between an input port to which signal light modulated at a frequency f_s is supplied and an output port; and